

Appln. No. 09/595,201
Amdt. Dated September 22, 2009
Reply to Office Action of July 2, 2009

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A brake assembly for a motor, and suitable for use in aerospace applications, the brake assembly comprising a stack of brake elements, at least one of which is rotatable with an output shaft of the motor, in use, and at least one of which is non-rotatable relative to a housing, and an actuator arrangement for controlling the magnitude of the compressive load applied to the brake elements, wherein the brake elements are provided, at least in part, with an applied surface coating of tungsten carbide which raises and maintains the coefficient of friction of the brake elements to a value greater than 0.5, and can withstand high temperatures of about 1000°C generated upon repeated use of the brake assembly.

2. (Cancelled)

3. (Previously Presented) The brake assembly as claimed in Claim 1, wherein the coefficient of friction falls within the range 0.5 to 0.6.

4. (Previously Presented) The brake assembly as claimed in Claim 1, wherein the surface coating forms a layer of thickness falling within the range of 0.64 mm to 1.27 mm.

5. (Original) The brake assembly as claimed in Claim 1, wherein the stack of brake elements takes the form of a first brake element which is rotatable with the output shaft

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of the motor, in use, and a second brake element which is non-rotatable relative to the housing.

6. (Original) The brake assembly as claimed in Claim 5, wherein the second brake elements forms part of a cap forming part of the housing.

7. (Original) The brake assembly as claimed in Claim 5, further comprising an arrangement for preventing contact between the first and second brake elements when the actuator arrangement is actuated.

8. (Previously Presented) The brake assembly as claimed in Claim 7, wherein the arrangement for preventing contact between the first and second brake elements includes a secondary spring for biasing the first brake element away from the second brake element, the second spring providing a biasing force which exceeds the weight of the first brake element.

9. (Original) The brake assembly as claimed in Claim 8, wherein the actuator arrangement comprises an electromagnetic actuator arranged to act against a primary spring, the spring force due to the secondary spring being sufficient to overcome the weight of the first brake element but being less than the spring force due to the primary spring.

10. (Original) The brake assembly as claimed in Claim 9, wherein the arrangement for preventing contact between the first and second brake elements further comprises a stop member arranged to limit axial movement of the first brake element relative to an armature forming part of the actuator means.

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11. (Original) The brake assembly as claimed in Claim 10, wherein the stop member takes the form of a shoulder provided on a rotor shaft which is rotatable with the output shaft of the motor.

12. (Original) The brake assembly as claimed in Claim 11, wherein the rotor shaft is provided with an abutment member, the second spring being located between the abutment member and the first brake element.

13. (Original) The brake assembly as claimed in Claim 1, wherein at least one of the brake elements takes the force of a brake disc.

14. (Original) The brake assembly as claimed in Claim 1, wherein the actuator arrangement comprises an electromagnetic actuator arranged to act against a primary spring.

15. (Previously Presented) The brake assembly as claimed in Claim 14, wherein the electromagnetic actuator includes an actuator winding located such that the brake elements are accessible without requiring removal of the actuator winding from the motor.

16. - 19. (Cancelled)

20. (Previously Presented) A brake assembly for a motor, the brake assembly comprising a stack of brake elements, at least one of which is rotatable with an output shaft of the motor, in use, and at least one of which is non-rotatable relative to a housing, and an actuator arrangement for controlling the magnitude of the compressive load applied to the

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brake elements, wherein the brake elements are provided, at least in part, with a coating which raises the coefficient of friction of the brake elements to a value greater than 0.2,

wherein the stack of brake elements takes the form of a first brake element which is rotatable with the output shaft of the motor, in use, and a second brake element which is non-rotatable relative to the housing,

the brake assembly further comprising an arrangement for preventing contact between the first and second brake elements when the actuator arrangement is actuated,

wherein the arrangement for preventing contact between the first and second brake elements includes a secondary spring for biasing the first brake element away from the second brake element, the secondary spring providing a biasing force which exceeds the weight of the first brake element,

wherein the actuator arrangement comprises an electromagnetic actuator arranged to act against a primary spring, the spring force due to the second spring being sufficient to overcome the weight of the first brake element but being less than the spring force due to the primary spring,

wherein the arrangement for preventing contact between the first and second brake elements further comprises a stop member arranged to limit axial movement of the first brake element relative to an armature forming part of the actuator means,

wherein the stop member takes the form of a shoulder provided on a rotor shaft which is rotatable with the output shaft of the motor, and

wherein the rotor shaft is provided with an abutment member, the second spring being located between the abutment member and the first brake element.